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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,941	08/28/2006	Shunji Sekiguchi	295473US0PCT	2658
22850	7590	02/17/2010		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER ZEMEL, IRINA SOPHIA	
			ART UNIT 1796	PAPER NUMBER
			NOTIFICATION DATE 02/17/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/590,941

Applicant(s)

SEKIGUCHI ET AL.

Examiner

Irina S. Zemel

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2, 10, 11 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2, 10, 11 and 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2, 10-11, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui et al U.S. Patent 6,800,688 in combination with WO 03/057778 to (Komoto et al U.S. Patent 7,208,552 used as English language equivalent) and further in combination with Mitsui '009 .

The Usui and Komoto references have been discussed in detail in the previous office action. This discussion is incorporated herein by reference. The Usui reference does not address the melting temperature (T_m) property of the random PP polymer prior to modification, thus implying that random PP of any known T_m and generally known to be suitable for the applications disclosed in Usui are suitable for as the underlying PP polymer for invention of Usui. As previously discussed, Mitsui specifically discloses that random PP co-polymers useful as adhesives should have T_m as low as 70 C, (which overlaps with the claimed T_m as NOW amended), and, in addition, (similarly to the teachings of Komoto), teaches that the PP melting point is a variable governing solubility of the modified PP in solvents. Therefore, should the PP polymers disclosed in illustrative examples of Usui not inherently have T_m corresponding to the claimed T_m, it would have been obvious for an ordinary artisan to use underlying PP with T_m as low as 70 C to achieve the desired solubility and other properties of the

polymer that are consistent with low melting temperatures of PP polymers. In the absence of showing of unexpected results that can be attributed to low claimed Tm. Insofar as the newly added claim limitation that the PP based random polymer is a copolymer with another alpha olefin, such PP based copolymers are expressly disclosed in Usui as preferred PP based olefins (and EP or EPB random copolymers are used in all illustrative examples). In addition the Komoto reference expressly discloses preferred metallocene catalyzed as PP copolymers with alpha olefins corresponding to the claimed alpha olefins.

Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Usui et al U.S. Patent 6,800,688 in combination with Komoto and Mitsui '009 as applied to claim 2 above, and further in view of Kimura et al U.S. Patent 5,539,043.

The rejection stands as per reasons of record and discussion of claim 2 above.

Response to Arguments

Applicant's arguments filed 12-15-2009 have been fully considered but they are not persuasive. The applicants argue that Usui fails to teach random PP polymers obtained using metallocene catalyst. The examiner agrees with the statement that the Usui reference does not disclose such polymers, however, this argument has been addressed in the previous office actions in detail, including discussions why it would have been obvious to use such PP random copolymers as the underlying polypropylene copolymer.

The applicants further state that "In addition to the absence of the feature (E), the product of Komoto also lacks the feature (F). That is, the product Komoto is chlorinated

before or after graft modification, and therefore the random copolymer in the resin composition of Komoto is a chlorinated copolymer. Therefore, the product of Komoto is a chlorinated resin, and therefore the product of Komoto is different from a grafted copolymer of propylene and ethylene (feature (F))." To the extent this arguments even makes sense, the examiner wishes to emphasize that while the (E) feature absent in Komoto, the (F) feature is a characteristic of underlying unmodified polymer. It is the unmodified random copolymer which is the copolymer of propylene and another alpha olefin (not necessarily ethylene as claimed now). It is noted that the after modification, the claimed polyolefin is NOT a copolymer of only propylene and another olefin, it also contains acid or ester modifiers. Similarly, the underlying copolymers of Komoto are random copolymers of propylene with another olefin. This random copolymers is THEN chlorinated or modified, similarly to the modification of the claimed copolymer, which takes place subsequently to copolymer formation. In any event, the arguments that Komoto is lacking feature (F) is not seen as relevant to the rejection.

The applicants argue that it would not have been obvious to use metallocene PP based copolymers of Komoto and apply to Usui since behavior of chlorinated resins have very different behavior of non-chlorinated resins. While this may be so, the differences in behavior that provide motivation to use the metallocene catalyzed PP random copolymer disclosed by Komoto as the base copolymer in invention of Usui are attributed to the behavior of the UNMODIFIED copolymer as discussed in the previous office action. The improved solubility can be clearly attributed to the underlying random copolymer, not the presence or amount of chlorine in the modified polymer resin. As

previously discussed, a predictable difference in behavior is expected in ANY type of modified polymer regardless of type of modification based on the underlying PP polymer (type of catalyst). The Komoto reference expressly discusses (for example, last paragraph of column 6 and lines 1-26 of column 7), that the difference in solubility and other properties is attributed to type of catalyst used in production of the underlying copolymer, since metallocene catalyzed polymers have very narrow MWD and have very small fraction of low molecular weight polymer which reduces solvent resistance of ANY polymer. Therefore, once again, the examiner disagrees with the applicants arguments and maintains her position that it would have been clearly obvious for an ordinary artisan to combine the teachings of the cited references to arrive to the claimed invention with reasonable expectation of success.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

Irina S. Zemel
Primary Examiner
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